



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,731	07/26/2001	Dae-Sik Oh	1675	7873

28005 7590 06/03/2005
SPRINT
6391 SPRINT PARKWAY
KSOPHT0101-Z2100
OVERLAND PARK, KS 66251-2100

EXAMINER

PEREZ, JULIO R

ART UNIT	PAPER NUMBER
----------	--------------

2681

DATE MAILED: 06/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/915,731	OH ET AL.	
	Examiner	Art Unit	
	Julio R Perez	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/21/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 5-19 rejected under 35 U.S.C. 102(e) as being anticipated by Soliman (6321090).

Regarding claims 5, 18, Soliman discloses a method and a system for establishing an active set for a mobile station operating in a cellular wireless system, the method comprising: determining a physical position of the mobile station (col. 3, lines 1-4); establishing a proposed set of active sectors (col. 3, lines 23-37; col. 6, lines 64-67; col. 7, lines 1-3, col. 6, lines 64-67; col. 7, lines 1-7, after the detection of the position of the mobile station that moves around several cells or sector within the system, the determination of which sectors to serve the mobile device is made; hence, an identification of the sector or cell that covers the mobile is performed); and using the physical position of the mobile station as a basis to select a subset of active sectors

Art Unit: 2681

from the proposed set of active sectors, the subset of active sectors defining the active set (col. 16-21; col. 6, lines 7-13, 31-49, 64-67; col. 7, lines 1-11, the sector or cell selected is thus the cell that the mobile is approaching to, the target cell that is near to the mobile station).

Regarding claim 6, Soliman discloses, further comprising: sending an indication of the active set to the mobile station (col. 2, lines 43-51, when the mobile is approaching a hand-off area, or departing from its current serving sector and approaching a new strongest-signal sector, a control signal is sent to the mobile for handing off to the cell with strongest pilot).

Regarding claim 7, Soliman discloses, wherein determining the physical position of the mobile station comprises: receiving a signal from the mobile station indicating the mobile station position (col. 2, lines 54-59; col. 3, lines 25-27, the mobile station comprises a position equipment system to disclose its position).

Regarding claim 8, Soliman discloses, wherein determining the physical position of the mobile station comprises: querying a mobile positioning center to obtain an indication of the physical position of the mobile station (col. 2, lines 54-59; col. 3, lines 25-27; col. 5, lines 35-47).

Regarding claim 9, Soliman discloses, wherein establishing the proposed set of active sectors comprises: identifying at least one sector that encompasses the physical position, the at least one sector defining the proposed set of active sectors (col. 6, lines 1-15, 64-67; col. 7, lines 1-4, the position database detects the cells that cover the position of the mobile station).

Regarding claim 10, Soliman discloses, wherein identifying at least one sector that encompasses the physical position comprises: querying a sector coverage database to identify the at least one sector that encompasses the physical position (col. 2, lines 54-59; col. 3, lines 25-27; col. 5, lines 35-47).

Regarding claim 11, Soliman discloses, wherein the subset of active sectors consists of only one sector, and wherein using the physical position of the mobile station as a basis to select the subset of active sectors comprises: selecting from the proposed set of active sectors a sector to which the mobile station is closest (col. 2, lines 54-59; col. 3, lines 25-27; col. 5, lines 35-47; col. 6, lines 1-15, 64-67; col. 7, lines 1-4, the position database detects the nearest cells that cover the position of the mobile station).

Regarding claim 12, Soliman discloses, wherein the subset of active sectors consists of only two sectors, and wherein using the physical position of the mobile station as a basis to select the subset of active sectors comprises: selecting from the proposed set of active sectors two sectors to which the mobile station is closest (col. 2, lines 54-59; col. 3, lines 25-27; col. 5, lines 35-47; col. 6, lines 1-15, 64-67; col. 7, lines 1-4, the position database detects the nearest pilots covering the position of the mobile station).

Regarding claim 13, Soliman discloses, wherein sending an indication of the active set to the mobile station comprises: sending a Handoff Direction Message (HDM) to the mobile station, the HDM including the indication of the active set (col. 7, lines 1-4; col. 8, lines 20-31).

Regarding claim 14, Soliman discloses a soft handoff method comprising: as the mobile station moves from a first position to a second position, wherein the proposed set of active sectors when the mobile station is at the first position is different than the proposed set of active sectors when the mobile station is at the second position (col. 7, lines 40-67; col. 8, lines 1-31).

Regarding claim 15, Soliman discloses a soft handoff method comprising: when the mobile station is at a first position, thereby establishing a first active set; when the mobile station has moved from the first position to a second position, thereby establishing a second active set different than the first active set (col. 7, lines 40-67; col. 8, lines 1-31).

Regarding claim 16, Soliman discloses a method comprising: periodically performing the method of claim 6 (col. 7, lines 40-67; col. 8, lines 1-31).

Regarding claim 17, Soliman discloses a method of establishing an active set for a mobile station operating in a cellular wireless system, the method comprising: determining a physical position of the mobile station (col. 3, lines 1-4); querying a sector coverage database to identify a plurality of sectors that encompass the physical position (col. 2, lines 54-59; col. 3, lines 25-27; col. 5, lines 35-47); selecting from the plurality of sectors at most two sectors to which the mobile station is closest, the at most two sectors defining an active set (col. 16-21; col. 6, lines 7-13, 31-49, 64-67; col. 7, lines 1-11, the sectors or cells selected are thus the cells that the mobile is approaching to, the target cells that are nearest to the mobile station); and sending to the mobile station an indication of the active set (col. 2, lines 43-51, when the mobile is approaching a hand-

Art Unit: 2681

off area, or departing from its current serving sector and approaching a new strongest-signal sector, a control signal is sent to the mobile for handing off to the cell with strongest pilot).

Regarding claim 19, Soliman discloses a system for establishing an active set for a mobile station operating in a cellular wireless system, the system comprising: a processor (col. 2, lines 1-67; col. 3, lines 1-4, a processor within the access selector to process data regarding the location of base stations in relation to the position of the mobile); data storage (col. 6, lines 50-63); program instructions stored in the data storage and executable by the processor to cause the processor (i) to determine a physical position of the mobile station (col. 6, lines 1-12), (ii) to establish a proposed set of active sectors (col. 3, lines 23-37; col. 6, lines 64-67; col. 7, lines 1-3, col. 6, lines 1-67; col. 7, lines 1-7, after the detection of the position of the mobile station that moves around several cells or sector within the system, the determination of which sectors to serve the mobile device is made; hence, an identification of the sector or cell that covers the mobile is performed), (iii) to use the physical position as a basis to select a subset of active sectors from the proposed set of active sectors, the subset defining an active set (col. 3, lines 23-37; col. 6, lines 64-67; col. 7, lines 1-3, col. 6, lines 1-67; col. 7, lines 1-7, and (iv) to provide an indication of the active set for transmission to the mobile station (col. 3, lines 23-37; col. 6, lines 64-67; col. 7, lines 1-3, col. 6, lines 1-67; col. 7, lines 1-7).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Pub. No. 2000027889 to Yun et al.	Link data to a handoff mobile station in CDMA
US Pub. No. 20040203780 to Julka et al.	Services mobile station handoff
US Pub. No. 20030017837 to Kalliojarvi	Adjusting gain of a mobile station on idle mode

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R Perez whose telephone number is (571) 272-7846. The examiner can normally be reached on 7:00 - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2681

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


JP
5/30/05


EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER